FIG. 1

Clustering Unit (1)

- Document Storage Unit (11)
- Sentence Analyzer (12)
- Feature Element Extractor (13)
- Feature Table Generator (14)
- Document Categorizing Unit (15)
- Categorization Result Storage Unit (16)

Cluster Merging Unit (2)

Categorization Result Outputting Unit (3)

- Output Control Unit (31)
- Display Unit (32)

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T1 — Paper Cassette

A1 — The machine is equipped with a universal paper cassette in the standard configuration. The universal paper cassette can be replaced with a high-capacity paper cassette dedicated to supplying A4-size paper. In the standard configuration, 200 sheets of paper can be set on the tray. In addition to the standard universal paper cassette, ...

D1

T2 — Installation of Additional Memory

A2 — The memory of the laser printer can be extended by installing an additional memory. The extention of memory provides improvements such as a reduction in time needed for the operation of the personal computer. Note that the degree of improvement depends upon the environment in which the laser printer is used. When image data is printed, installation of a ... Mb additional memory is recommended.

D2

T3

A3 — Installation of an Optical Interface Card

D3 — An optional interface card can be used to connect the printer directly to a network in this case, ...

T4 — Swiitching the Paper Setting Among "Tray", "Cassette" and "Auto".

A4 — When printing is performed using one of various applications, setting of the paper feeder and the paper size is necessary. Check that the paper guide clip on the paper cassette is located at a correct position corresponding to the paper size. When the printer is used in an environment other than a network environment ...

D4

T5 — Installation of an Additional Hard Disk Drive to Install Additional Fonts

A5 — Additional fonts can be installed by ... An optional font ROM can also be installed to do ... When an additional hard disk drive is installed to install a commercially available font ...

D5

T6 — Smear Created on Printer Paper

A6 — When a black smear is created in an end region of paper or on the back surface of paper, clean the fixing roller in the printer. Select "Printing for Cleaning" from the setting menu provided on the panel of the printer and perform printing for cleaning on A4-size cleaning paper. Thereafter, ...

D6 — It is recomended to clean the fixing roller periodically in addition to the cleaning performed after replacing the cartridge. Reproduced paper can be used for the purpose of protecting natural environments.

T7 — Installation of an Additional Paper Cassette

A7 —   Up to two optional double cassette units or high-capacity paper cassette units dedicated to supplying A4-size paper can be installed.
        When two double cassette units are added, it becomes possible to ...

D7 — The A3 universal paper cassette can be replaced with ...to ...
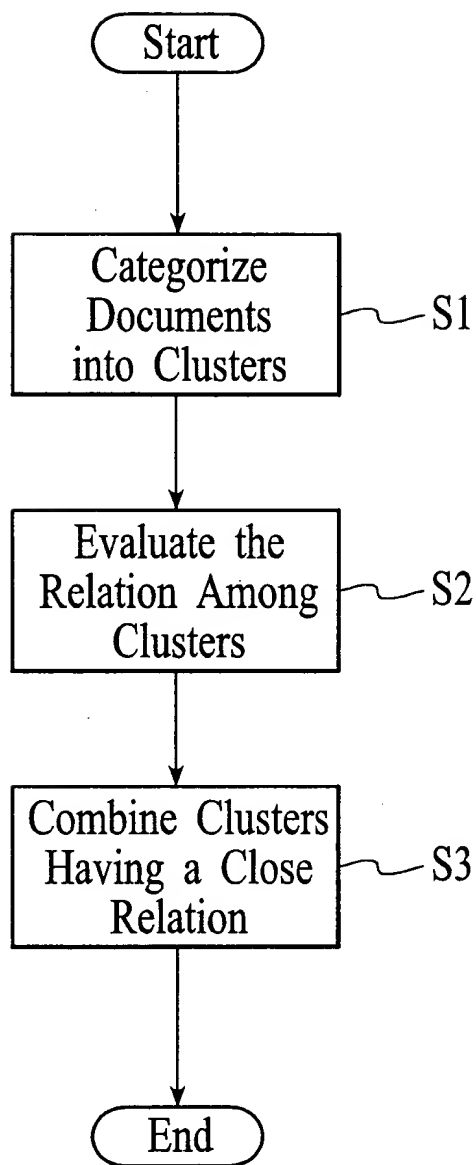
FIG. 2

Start

Categorize
Documents
into Clusters — S1

Evaluate the
Relation Among — S2
Clusters

Combine Clusters
Having a Close — S3
Relation

End

FIG. 3

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Feature Element	Document D1	Document D2	Document D3	Document D4	Document D5	Document D6	Document D7
Paper	1			1		1	1
Cassette	1			1			1
Installation		1	1		1		1

FIG. 4

FIG. 5

Feature Element	Cluster
Paper	D1, D4, D6, D7
Cassette	D1, D4, D7
Installation	D2, D3, D5, D7

FIG. 6

Cluster C1	D1, D2, D3, D4, D8
Cluster C2	D3, D4, D5, D6, D7, D8

FIG. 7

Feature Element	Cluster
Paper+Cassette	D1, D4, D6, D7
Installation	D2, D3, D5, D7
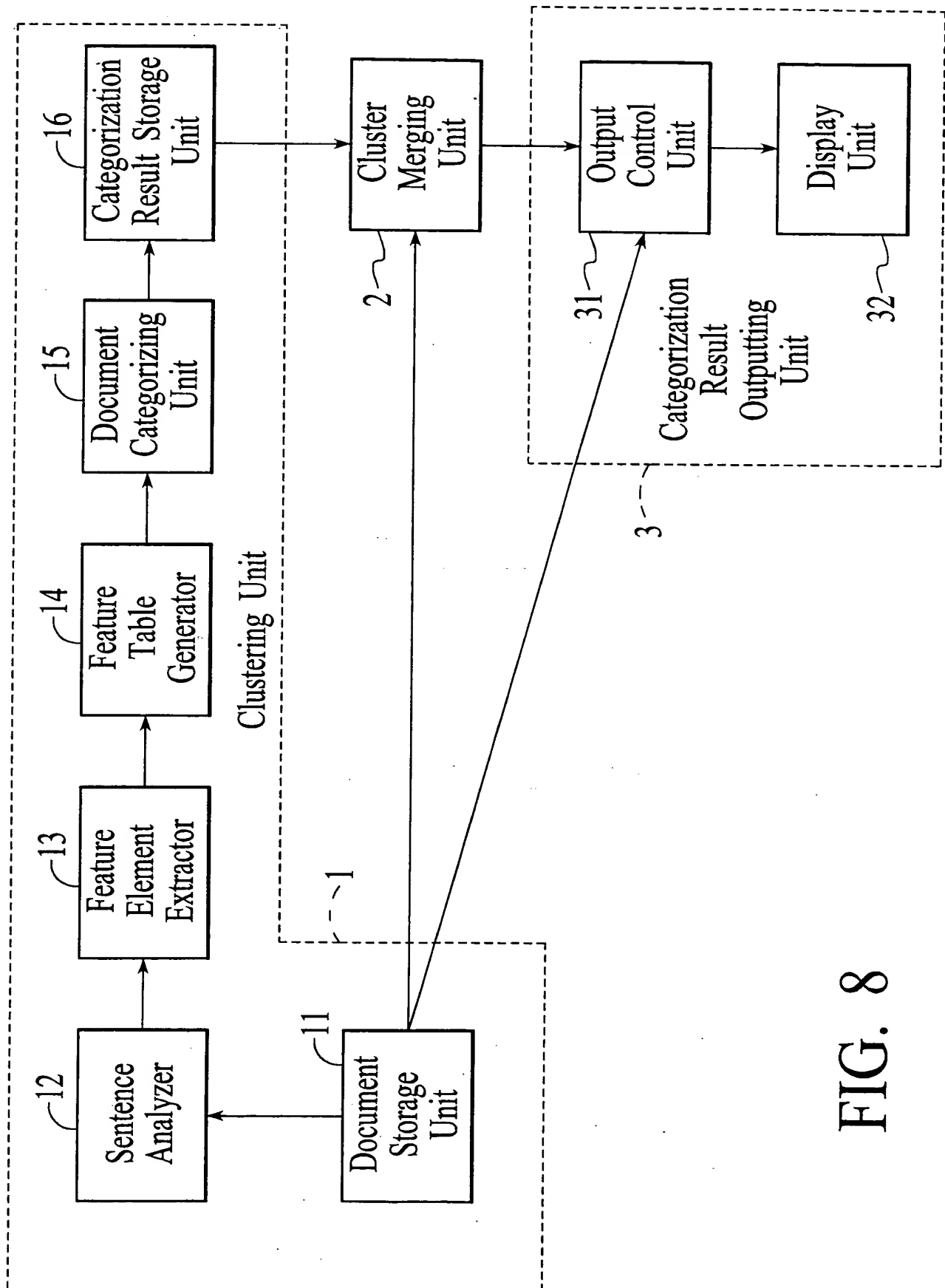
FIG. 8

FIG. 9

Clustering Unit 91

- Sentence Analyzer 912
- Feature Element Extractor 913
- Feature Table Generator 914
- Document Categorizing Unit 915
- Categorization Result Storage Unit 916

Document Storage Unit 911

Cluster Merging Unit 92

Cluster Merging Process Imformation Generator 93

- Relation Evaluator 931
- Manner-of-Displaying-Cluster-Name Determiner 932

Categorization Result Out Unit 94

- Output Control Unit 941
- Display Unit 942
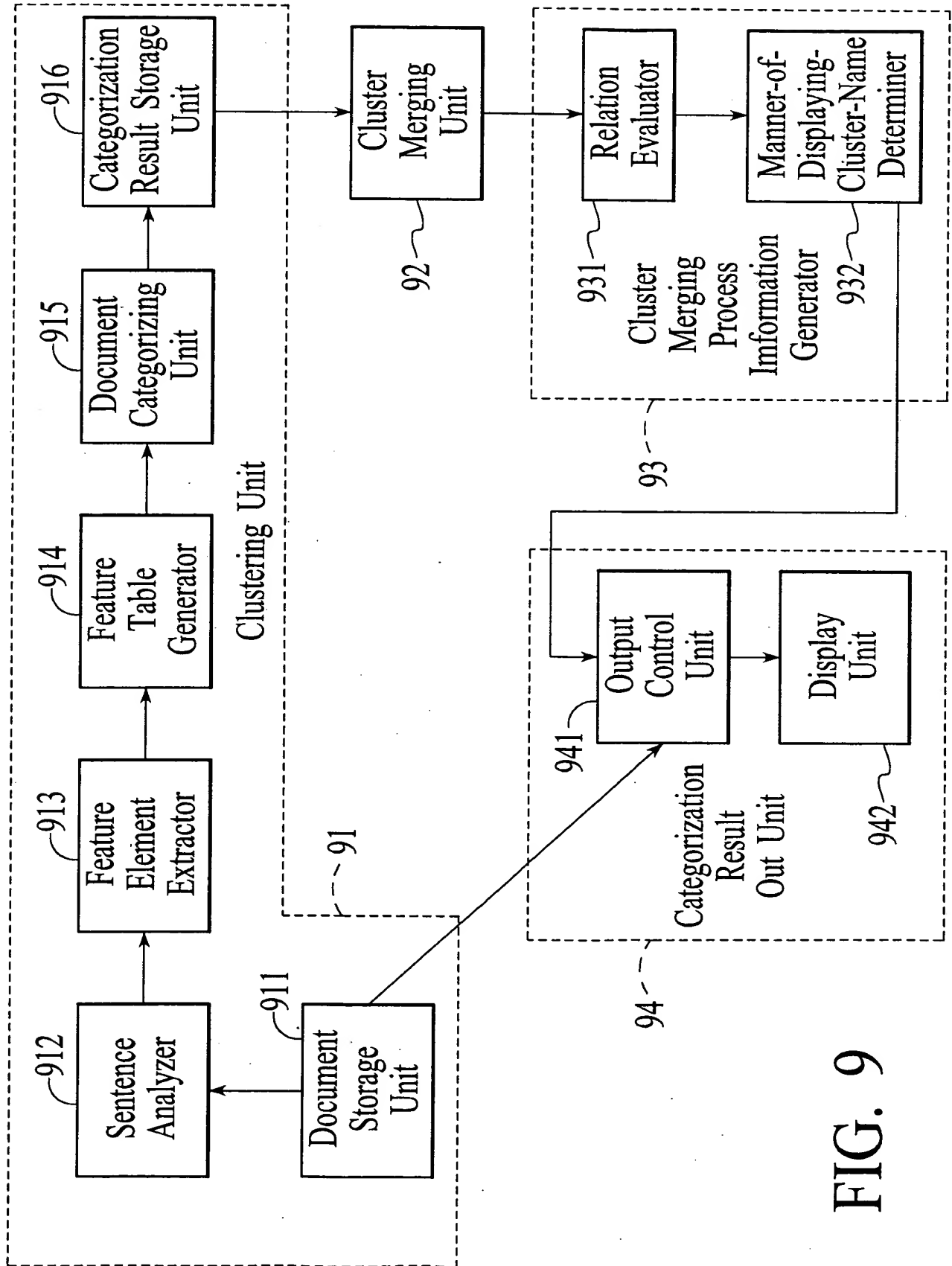
T1 * <u>Paper Cassette</u>

A1　The machine is equipped with a universal paper cassette in the standard configuration. The universal paper cassette can be replaced with a high-capacity paper cassette dedicated to supplying A4-size paper. In the standard configuration, 200 sheets of paper can be set on the tray.

D1

T2 * Installation of Additional Memory

A2　The memory of the laser printer can be extended by installing an additional memory. The extention of memory provides improvements such as a reduction in time needed for the operation of the personal computer. Note that the degree of improvement depends upon ...

D2

T3
A3 * Installation of an Optical Interface Card
D3　An optional interface card can be used to connect the printer directly to a network in this case,......

T4 * Switching the Paper Setting Among "Tray", "<u>Cassette</u>" and "Auto".

A4　When printing is performed using one of various applications, setting of the paper feeder and the paper size is necessary. Check that the paper guide clip on the paper cassette is ...

D4

T5 * <u>Installation</u> of an Additional Hard Disk Drive to Install Additional Fonts

A5　Additional fonts can be installed by ... An optional font ROM can also be installed to ...

D5

T6 * Smear Created on Printer Paper

A6　When a black smear is created in an end region of paper or on the back surface of paper, clean the fixing roller in the printer. Select "Printing for Cleaning" from the setting menu provided on the panel of the printer and perform printing for cleaning on A4-size cleaning paper. Thereafter, ...

D6

T7 * Installation of an Additional <u>Paper Cassette</u>

A7　Up to two optional double cassette units or high-capacity paper cassette units dedicated to supplying A4-size paper can be installed.
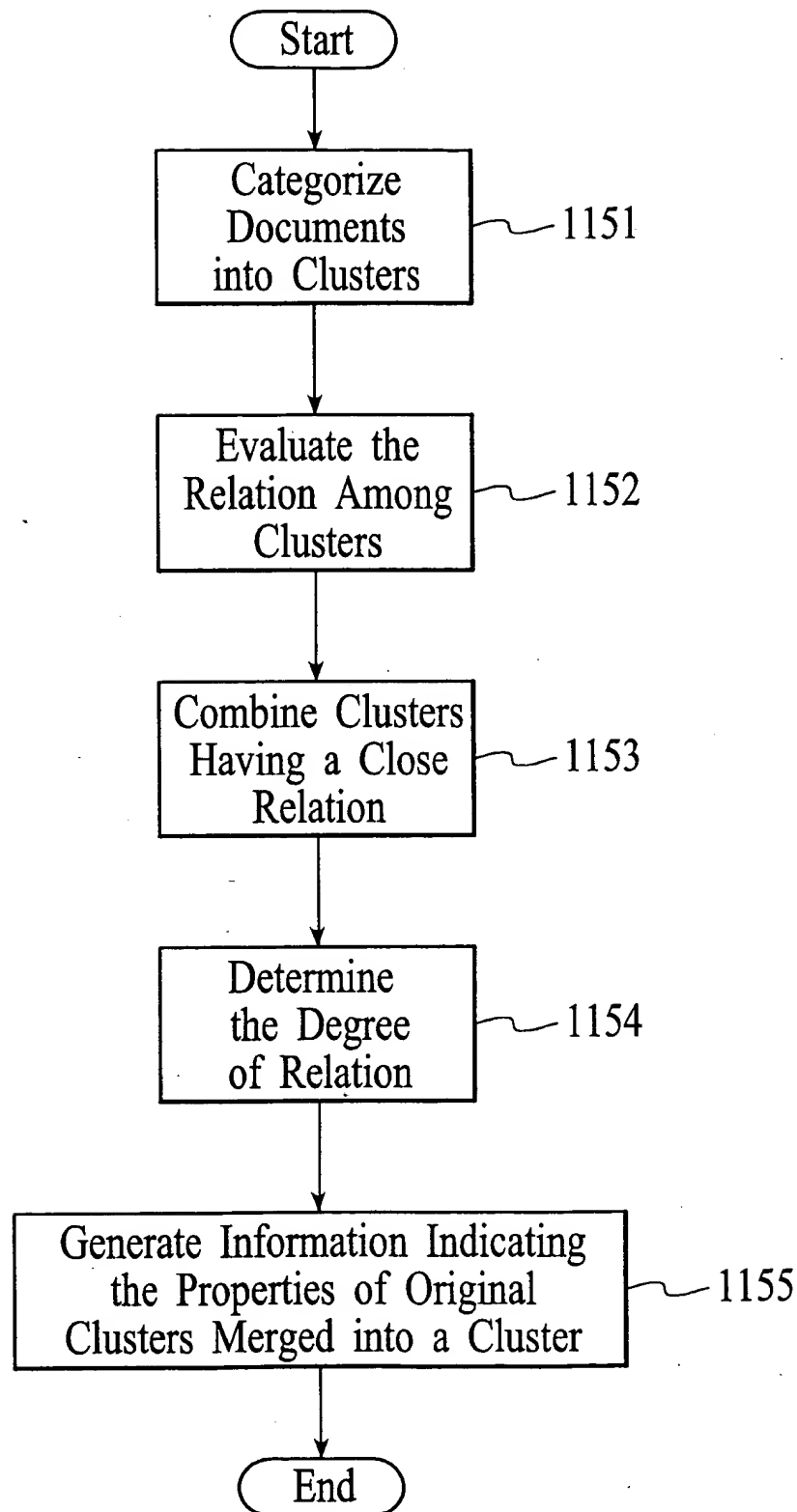
D7

FIG. 10

Start

```
Categorize
Documents        ——1151
into Clusters
```

```
Evaluate the
Relation Among   ——1152
Clusters
```

```
Combine Clusters
Having a Close   ——1153
Relation
```

```
Determine
the Degree       ——1154
of Relation
```

```
Generate Information Indicating
the Properties of Original       ——1155
Clusters Merged into a Cluster
```

End

FIG. 11

Feature Element	Document D1	Document D2	Document D3	Document D4	Document D5	Document D6	Document D7
Paper	1			1		1	1
Cassette	1			1			1
Installation		1	1		1		1

FIG. 12

Feature Element	Cluster
Paper	D1, D4, D6, D7
Cassette	D1, D4, D7
Installation	D2, D3, D5, D7

FIG. 13

Cluster C1	D1, D2, D3, D4, D8
Cluster C2	D3, D4, D5, D6, D7, D8

FIG. 14

Feature Element	Cluster
Paper+Cassette	D1, D4, D6, D7
Installation	D2, D3, D5, D7

FIG. 15

FIG. 16

Cluster Name	Title Of Document
Paper Cassette	* Paper Cassette * Switching the Paper Setting Among "Tray", "Cassette", "Auto" * Smear Created on Printed Paper * Installation of an Additional Paper Cassette

FIG. 17

Cluster Name	Title Of Document
Paper Cassette	* Paper Cassette * Switching the Paper Setting Among "Tray", "Cassette", "Auto" * Smear Created on Printed Paper * Installation of an Additional Paper Cassette